



RESEARCH ARTICLE :

Molecular characterization of plant growth promoting Rhizobacteria associated with ground nut (*Arachis hypogea*) and sorghum (*Sorghum bicolor*)

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SUMMARY : In search of efficient PGPR strains with multiple activities, a total of 32 bacterial isolates belonging to *Bacillus* (20) and *Rhizobium* (12) were isolated from different rhizospheric soils of ground nut and sorghum in the Mahaboobnagar district. These isolates were biochemically characterized and screened *in vitro* for their plant growth promoting traits like phosphate solubilization, production of indoleacetic acid (IAA), hydrogen cyanide (HCN) and siderophore. The molecular diversity of 10 selected plant growth promoting rhizobacterial isolates *viz.*, *Bacillus cereus* and *Rhizobium* spp. was studied by PCR-RAPD technique. The 10 plant growth promoting rhizobacterial isolates were selected based on their multifunctional PGPR traits *i.e.* each isolate is having best or good PGPR property among the 32 isolates and some isolates that having multiple PGPR traits also taken in to consideration.

KEY WORDS :

Rhizobacteria,
Groundnut, Sorghum

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